

BRITISH PUGS

By Brig. E. C. L. SIMSON*

(Continued from Volume 92, page 266)

20. *E. succenturiata* Linn. In my view this is far and away the most luxurious of the pugs. The contrast of white thorax and dark abdomen; the ample wings with their broad, dark edging surrounding a bright, white centre; itself covered with most delicate striae and set off with a large, black discal dot. So elegant! Larvae on Yarrow. Aug. & Sept. Note that they feed on the feathery leaves in preference to the flowers.

21. *E. millefoliata* Rossl. Through the kindness of Dr. John Langmaid, who guided me, in person, to a choice site for this moth on the South Coast, I have bred a perfect series of this comparatively recent discovery. (First found in Hampshire in 1951). It is one of our largest pugs and, when bred, shows some warm, brown markings to relieve the rather drab, grey, general effect. Until shown how to find the larvae by Dr. Langmaid I had made a couple of abortive trips to the coast in previous years. I had always looked on the white flower-heads of the Yarrow and returned, each time, empty-handed. Dr. Langmaid said the larvae were only to be found on the brown, withered-looking seed-heads. Here the dark brown larvae achieve complete camouflage. I believe this to be the most perfectly adapted of all our pug larvae and, at first, had considerable difficulty in spotting them amongst the tightly packed seed-heads. Unfortunately, this concealment from human and, probably, birds' eyes had no effect on the parasitic *Apanteles* which prey on all pug larvae. The losses amongst *millefoliata* larvae can be heavy, as the little, yellow cocoons of the parasite proliferate in the breeding box. However, a visit in a subsequent year enabled me to complete the series shown.

22. *E. castigata* Hübner. Rather a nondescript moth when caught in the wild. When bred, however, certain characteristics show up well; the chief one being the well marked double striae on the centre of the forewings. The larvae come to hand in fair numbers when sweeping for *subumbrata* larvae on the downland in August. This species occasionally produces an unusual, unmarked, dark-grey type, very similar to *virgaureata*. However, the lateral series of small, black spots on the abdomen distinguish it.

23. *E. lariciata* Freyer. A fine pug, being larger and more boldly marked than *castigata*. It also bears a white spot at the base of the thorax, which is the sure sign of the species. The larvae are often difficult to reach, because the favourite haunt of this species is thick-planted stands of Larch (*Larix decidua*.) 40-50 ft high, with all the lower branches dead. This means the larvae are feeding over 30 ft from the ground. Furthermore, the imagoes also pass the day high up amongst the

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larches and can not readily be flushed. However, an M.V. light, placed on the edge of the plantation in late June, will bring *lariciata* swarming to the sheet. Many will be in immaculate condition, indistinguishable from bred ones. Females can, of course, be kept for ova.

24. *E. virgaureata* Doubl. In 1979 I was indebted to John Fenn for the receipt of a few larvae from Derbyshire. They did well enough on the ragwort I supplied them, until the time came for pupation, when 70% died. However, four pupae were made and to date one imago has emerged. The moth is uniformly dark grey with very pointed wings. Black, lateral veins on the forewings are conspicuous. In size it is equal to the average *castigata*. As regards the larva, I have nothing to add to G. M. Haggett's fine illustrations in *Proc. Br. Ent. Nat. Hist. Soc.* Vol. 1, plt. III and his comments, except to say that, when disturbed, the larva assumes a corkscrew position and throws back its head and first three segments with its feet in the air, and have not noticed this extraordinary behaviour in any other pug larvae.¹

25. *E. plumbeolata* Haw. Of this species B. Goater writes in *The Butterflies and Moths of Hampshire and the Isle of Wight* (1974): "The food plant, *Melampyrum pratense* is very local, and colonies exist on which I am sure the moth is absent". This is only too true and even when the moth has been proved to exist it may be only in very small numbers.

I am thinking, particularly, of Pamber Forest in Hampshire. There the Cow Wheat covers large areas of the Forest and yet, work it as I may, with M.V. light and beating through the undergrowth, I have taken but four imagos; two on 29.5.77 (one by beating, one to light) and two on 3.6.80, both by beating. At such a low density I have made no effort to collect the larvae. Where, in such a mass of pabulum, is one to start?

The moth itself is entirely unexciting and, in a worn condition, can be distinguished from *tenuiata* by the fact that the abdomen is without markings. In a series, it is also larger.

26. *E. haworthiata* Doubl. Wherever *Clematis vitalba* grows in the southern half of Britain there, I would opine, this small pug will be found. On the Hampshire chalk its numbers must be vast: every clump of *vitalba* is infested with

¹ In rearing pugs I have become increasingly interested in the behaviour of larvae when disturbed. There is by no means an universal pattern: natural selection must have been at work! For instance, some larvae adopt an upright stance like a small stick; *pimpinellata* is a good example. Some fall to the ground and curl up; *subnotata* is such a one. *Succenturiata* freezes into a very good imitation of a question mark; but *sparsaria* flattens itself along the leaf's midrib and lies low. *Tripunctaria* does a bit of a corkscrew, like *virgaureata*, but does not throw its head and feet backwards. *Millefoliata* relies on its marvellous procrypsis and does nothing.

Of course, many pug larvae pass their lives hidden in a bud or seed-capsule. When disturbed, and shown the light of day, they take up no extravagant posture. They are, after all, what Shakespeare called "a worm i' the bud" and that is, precisely, what they look like!

the larvae, which disclose their presence by making a neat, round hole in the skin of the flower bud. Early August is a good time for the larvae. The imago, when bred, is dark grey with quite clear markings. The fact that the abdomen is suffused reddish towards the base is conclusive identification.

27. *E. pygmeata* Hubn. This species shares with *haworthiata* and *inturbata* the distinction of being Britain's smallest pug, but it is very much more handsome. When bred it appears quite glossy black, set off by a well pronounced subterminal line of white dots. Really very attractive. Once again I am indebted to John Fenn for my series. On the day after our success with *valerianata* we set off to find some growth of Mouse-ear Chickweed (*Cerastium vulgatum*²). My companion said that, because the whole water-table in the area had been lowered by persistent drainage, many of the marshy spots, where he had previously found the plant, had dried out and so had become unsuitable. We went to quite a few fenny places and searched without success. At last, in quite a small, wettish place amongst some fields we found the plant in small quantities. No flowers were present and the dried up plant, with its small seed cases, looked nothing like the illustration in my book. John was of the opinion that we might be too late for the larvae, the date being 28. 7. This was ideal for *valerianata* but latish for *pygmeata*, which was a month ahead.

However, we picked bits from here and there till we had a bunch to fill one of my cellophane bags. No signs whatever of larvae. With little hope, therefore, I returned home and a few days later looked in the bag, preparatory to throwing away the rather unsavoury, and already slightly mildewed, mess. Then, to my joy, I saw frass on the cellophane. No frass has been greeted with more joy! I put the whole mass back in a clean bag and a week later took it out and shook it over a large newspaper. Scarcely believing my good fortune, I counted ten *pygmeata* pupae on the paper. The pupa of this pug is unlike any other pug that I have seen; being bright, yellowish brown all over. From these ten pupae emerged the nine imagos in the collection.

28. *E. tenuiata* Hübn. In the Test valley, where I live, *Salix caprea* grows in uninhibited plenty. The catkins can be obtained, in early April, in enormous quantities, either by picking them from the tree or sweeping up those that have fallen. As the catkins of *Salix caprea* is the pabulum of *tenuiata* one might suppose that pug-hunters in the Test valley would be well supplied with the imago. Such is not the case. I do not know the reason why. Goater, in his book already quoted, states: "I have been unable to find a locality from which larvae may be bred in numbers from catkins".

Personally, I have found it difficult to find localities in which it may even be bred in ones! Once, in the New Forest

² Whereas both Meyrick and South give *Stellaria holostea* as the pabulum, John Fenn has never found *pygmeata* on this plant; always in the seed case of *C. vulgatum*.

(17.4.76), while waiting for the light to fade so that *Aleucis distinctata* might flit about the little stunted sloes out on the lawn, I picked a bag of *caprea* catkins and the next morning found one full grown *tenuiata* larva, which promptly pupated (emerging 23.6.76). Next spring I returned to this favoured area and obtained another singleton larva from catkins taken from many sallow bushes.

From time to time the moth appears at light, usually rather worn, and so serves to show up the rather drab beauties of the bred specimens. Altogether, an enigmatic species.

29. *E. trisignaria* H.-S. Fortunately the larva of this pug is readily identifiable by its black head, because the imago is not at all easy to tell at a glance. It is only very thinly scattered over most southern counties and, even if the odd specimen is taken at light, a careful examination of the local *Angelica* in the following September seldom produces a larva.

However, it is more plentiful in the West Midlands and I am indebted to Philip Sterling for the gift of some pupae from Herefordshire with which to augment my previous very small series.

(To be continued)

FALSEUNCARIA RUFICILIANA HAW. (LEP.: COCHILIDAE)
BIOLOGY. — Imagines of this species were first noted on Teg Down (V. C. 11) (Royal Winchester Golf Course) on 15th and 18th May 1979, flying in quite large numbers over *Primula veris*. When this area was next visited on 30th May, none were seen. However, on 24th July, it was again flying and specimens appeared quite fresh. The biology as given in Meyrick, *Revised Handbook of British Lepidoptera*; Bradley, Tremewan and Smith, *British Tortricoid Moths*; and Emmet, *Smaller British Lepidoptera*, is ova June and July, larva July to April, hibernating full-fed, and imago May and June. As the observations on Teg Down did not appear to fit this pattern, I visited the area with Dr. J. R. Langmaid on 8th June 1980, and we each gathered a dozen or so seed-heads of *Primula veris* at random. I had earlier noted imagines flying on 19th May. One or two of the seed-heads were opened a few days later and contained fairly mature larvae. Imagines started to appear from my batch on 4th July and over 30 emerged over the following three weeks. The batch kept by Dr. Langmaid was kept indoors and emergences took place a few days earlier than mine. As both 1979 and 1980 were cool summers, the July emergence cannot be put down to abnormally warm weather conditions, and so it must be concluded that the species is bivoltine, at least in this part of the country, and not univoltine as has been accepted previously. It seems unlikely that the larvae resulting from the July moths would feed on *Primula veris*, as the heads which are still left are hard and dry by this time. However, *Pedicularis sylvatica* has been recorded as an alternative food-plant in England, and numerous other plants on the Continent. — Col. D. H. STERLING, "Tangmere" 2 Hampton Lane, Winchester, Hampshire.